FIG.1A

FIG.1B

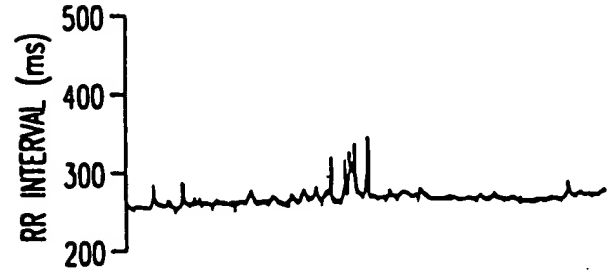

FIG.1C

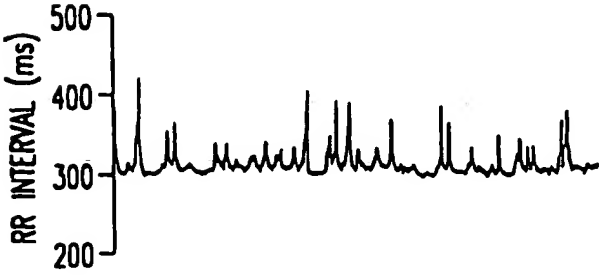

FIG.1D

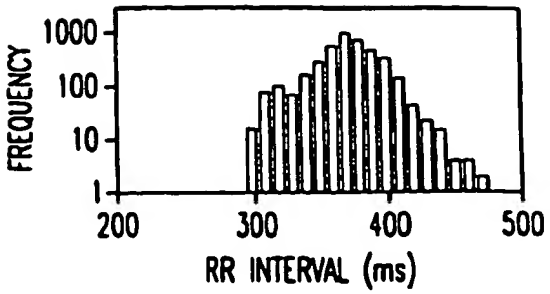

FIG.1E

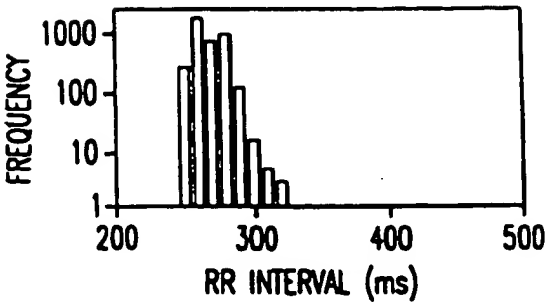

FIG.1F

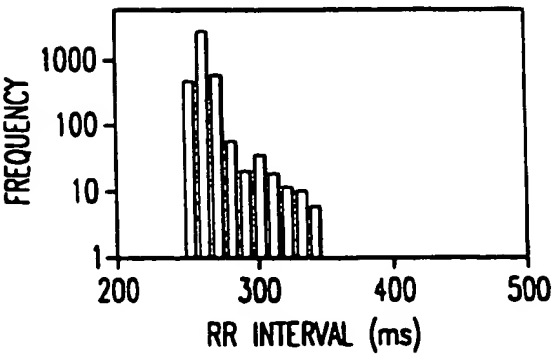

FIG.1G

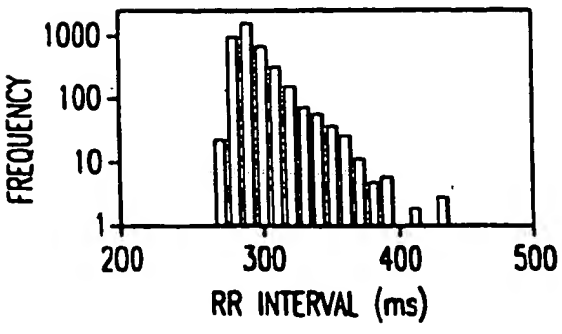

FIG.1H

value of monitoring HRV as a means of early diagnosis of sepsis and necrotizing enterocolitis in premature neonates has not heretofore been tested. Conventional measures of HRV fail to detect the abnormal HRV in the infants because these measurements, such as standard deviation and power are optimized to detect low variability. Additionally, prior studies showing low HRV in newborn infants with severe illness have typically focused on term rather than premature infants. See, e.g., Griffin MP, Scollan DF, Moorman JR. "The dynamic range of neonatal heart rate variability." *Journal of Cardiovascular Electrophysiology* 1994; 5:112-124.

BRIEF DESCRIPTION OF THE DRAWINGS

Figures 1A-D illustrate four 4096 beat RR interval time series and their frequency histograms. Figures 1E-H show the corresponding frequency histograms of RR intervals. All were recorded from the same infant who developed coagulase-negative staphylococcal septicemia and an enterococcal urinary tract infection.

Figures 2A-D illustrate the time course of conventional measures of HRV in an events group and a control group. The time labeled 0 is the time that the blood culture was obtained (events group) or was randomly assigned (control group).

Figures 3A and 3B illustrate the time course of skewness and P10 for the events group and control group of Figs. 2A-D.

Figure 4 illustrates time course of the mean RR interval, heart rate variability and clinical score for a clinically ill neonate.

Figure 5A is a plot of mean heart rate as a function of clinical score for a large group of neonates. Figure 5B is a plot of HRV, represented by coefficient of variation ("CV")(standard deviation divided by the mean), as a function of clinical score for a large group of neonates. Figure 5C is a plot of HRV, represented by the power from 0.02 to 0.2 Hz of a moving window of 2048 beats, as a function of clinical score for a large group of neonates.